IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A ~~device for controlling a~~ thick matter pump

with two conveyor cylinders (50, 50') communicating via two end openings (52) in a material supply container (54), the conveyor cylinders (50, 50') operated in counter stroke by a hydraulic reversible pump (6) via hydraulic drive cylinders (5, 5') driven ~~control~~ by the reversible pump, the hydraulic drive cylinders (5, 5') each having a rod end and a base end;

with a hydraulically actuated pipe switch (56) provided within the material supply container (54), the pipe switch having an inlet and an outlet, which pipe switch ~~is on its~~ inlet ~~side~~ is alternatingly connectable to one of the openings (52) of the conveyor cylinders (50, 50') freeing the respective other opening of the conveyor cylinders (50, 50'), and which pipe switch ~~on the~~ outlet ~~side~~ is connected with a conveyor conduit (58), wherein the drive cylinders (5, 5') are hydraulically connected at the base ~~one~~ end via respectively one hydraulic conduit (11, 11') to a connector of the reversible pump (6) and at ~~on~~ their rod ~~other~~ end are hydraulically connected with each other via an oscillating oil conduit (12) [[,]];

with at least two cylinder switch sensors (20, 20'; 22, 22') in predetermined separation from each other and spaced from the rod ends and/or base ends of the drive cylinders (5, 5') and sensitive to the passage by of a piston (8, 8') of the drive cylinder[[,]]; and

with a device (18) for controlling the thick matter pump responsive to the output signal of each ~~selected~~ cylinder switch sensor for ~~switching or~~ reversing the reversible pump (5) and the pipe switch (56) after completion of a piston stroke,

wherein the device is a computer assisted reversing device including a measurement and evaluation routine for determining, by measurement or computation, the temporal displacement of the piston on its way between the two cylinder ends, as well as for computing therefrom a derived initiation time for the subsequent reversing of the reversible pump and the pipe switch.

2. (currently amended) The thick matter pump ~~device~~ according to Claim 1, wherein the measurement and evaluation routine includes an algorithm for determining the time of the piston detection ~~passage~~ at the location of the cylinder switch sensors as well as for computing [[a]] the therefrom derived initiation time point for a reversing of the reversible pump and the pipe switch at each piston stroke, taking into consideration a predetermined or computed brake time of the piston prior to a respective impact at the end of the cylinder.

3. (currently amended) The thick matter pump ~~device~~ according to Claim 1, wherein the measurement and evaluation routine includes an algorithm for computing the speed of the piston on its way between the cylinder switch sensors and a therefrom derived initiation time point for the next reversing process, taking into consideration a predetermined or computed brake time of the piston prior to the respective impact at the end of the cylinder.

4. (currently amended) The thick matter pump ~~device~~ according to Claim 1, wherein the measurement and evaluation routine responds to a ~~, preferably input via a remote control,~~ target value for the conveyed amount of the reversible pump and includes an algorithm for determining the characteristic of the piston speed and the therefrom derived initiation time point for the next reversal process according to the measure of the current set target value.

5. (currently amended) The thick matter pump ~~device~~ according to Claim 1, wherein the measurement and evaluation routine includes an algorithm for determining the brake time or the brake path of the piston according to the magnitude of the instantaneously measured or computed piston speed and the therefrom derived initiation time point for the reversal process.

6. (currently amended) A process for controlling a thick matter pump with two conveyor cylinders (50, 50') communicating with two end openings (52) in a material supply container (54), the two conveyor cylinders (50, 50') operated in counter stroke via at least one hydraulic reversible pump (6) and via hydraulic drive cylinders (5, 5') driven by the reversible pump (6) ~~control thereby~~, the hydraulic drive cylinders (5, 5') each having a rod end and a base end; and with a pipe switch provided within the material supply container (54), the pipe switch having an inlet and an outlet, the pipe switch ~~on its~~ inlet ~~side~~ alternatingly connectable to the openings (52) of the conveyor cylinders (50, 50') for a conveyance stroke freeing the respective other opening, and the pipe switch ~~on the~~ outlet ~~side~~ connected with a conveyor conduit (58), the process comprising:

(a) monitoring ~~wherein~~ each conveyance stroke via ~~is monitored by~~ at least two cylinder switch sensors (20, 20'; 22, 22') at sensor positions spaced with predetermined separation from each other and from the rod and base ~~side~~ ends of the drive cylinder (5, 5'),

(b) using the output of the cylinder switch sensors (20, 20'; 22, 22') to measure or compute the position over time of the piston on its way between the rod and base ends of the drive cylinders,

(c) deriving therefrom the initiation time point for the respective next reversal process, and

(d) initiating at the initiation time point a reversing the reversible pump (5) and the pipe switch (56) [[,]]

~~wherein the temporal displacement course of the piston on its way between the two cylinder ends is measured and/or computed and therefrom the initiation time point for the respective next reversal process is derived~~.

7. (currently amended) The process according to Claim 6, wherein the passing of the pistons at the location of the cylinder switch sensors are detected in time relation to each other and that therefrom the initiation time point for the respective following reversal of the reversible pump and the pipe switch is calculated, taking into consideration a predetermined or computed brake time of the piston prior to the respective impacting at the end of the cylinder.

8. (currently amended) The process according to Claim 6, wherein the speed of the piston on its way between the ~~selected~~ cylinder switch sensors is calculated and that therefrom the initiation time point for the respective subsequent reversal of the reversible pump and the pipe switch is derived taking into consideration a predetermined or computed brake time of the piston prior to the respective impacting at the end of the cylinder.

9. (currently amended) The process according to Claim 6, wherein the movement of the piston over time is changed in response to ~~via~~ a remote control input changed target value for the conveyed amount, and that from the computed movement sequence of the piston according to the value of the input changed target value, taking into consideration the difference in brake time associated with the changed movement of the piston over time ~~a thereby modified brake time~~, the initiation time point for the subsequent reversal process is derived.

10. (currently amended) The process according to Claim 6, wherein the brake time or brake path of the piston is determined based on the ~~collective or computed~~ piston speed, respectively taking into consideration the device specific reaction time and reverse time of the reversible pump, and therefrom the respective next initiation time point is computed.

11. (new) The thick matter pump according to Claim 4, wherein the measurement and evaluation routine responds to a target value input via a remote control for the conveyed amount of the reversible pump.